No. 9200163

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'A2242'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington, D.C. *this* 30th *day of* September *in the year of our Lord one thousand nine hundred and* ninety-four.

Attest:

Kenneth A. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Mike Espy
Secretary of Agriculture

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Office, OIRM, Room 404-W, Washington, D.C. 20250, and to the Office of Management and Budget, Paperwork Reduction Project (OMB #0581-0055), Washington, 20250

FORM APPROVED: OMB 0581-0055, Expires 1/31/91

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
ASGROW SEED COMPANY

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO
XP2242

3. VARIETY NAME
A2242

4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
9646-190-20
7000 Portage Road
Kalamazoo, MI 49001

5. PHONE *(Include area code)*
616 385-6649

FOR OFFICIAL USE ONLY

PVPO NUMBER
9200163

FILING Date: April 27, 1992
Time: ☐ A.M. ☐ P.M.

FEES RECEIVED
Filing and Examination Fee: $ 2150.00
Date: April 20, 1992
Certificate Fee: $ 250.00
Date: Sept. 21, 1994

6. GENUS AND SPECIES NAME
Glycine Max

7. FAMILY NAME *(Botanical)*
Leguminosal

8. CROP KIND NAME *(Common Name)*
Soybean

9. DATE OF DETERMINATION
1987 (September) (U.S. 10/4/94)

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

12. DATE OF INCORPORATION
March 22, 1968

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Mr. Gary E Starwalt 616 385-6649
9646-190-20
Asgrow Seed Company
Gull Rd-Bldg 190, Kalamazoo, MI 49001

Dr. Alan WAlker 608 755-1777
Asgrow Seed Company
5926 Hwy14 East, Janesville, WI 53546

PHONE *(Include area code)*

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

- a [X] Exhibit A. Origin and Breeding History of the Variety
- b [X] Exhibit B. Novelty Statement
- c [ ] Exhibit C. Objective Description of Variety
- d [X] Exhibit D. Additional Description of Variety
- e [X] Exhibit E. Statement of the Basis of Applicant's Ownership
- f [X] Seed Sample (2,500 viable untreated seeds) Date Seed Sample mailed to Plant Variety Protection Office _____
- g [X] Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States"

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See section 83(a) of the Plant Variety Protection Act.)*
☐ YES *(If "YES," answer items 16 and 17 below)* [X] NO *(If "NO," skip to item 18 below)*

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES [X] NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED [X] CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES *(If "YES," through)* ☐ Plant Variety Protection Act ☐ Patent Act Give date _____
[X] NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☐ YES (If "YES," give names of countries and dates)
[X] NO

RECEIVED USDA AMS APR 20 1992 Plant Variety Protection Office

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE
Gary E. Starwalt	Soybean Product Manager	4/6/92
SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE
Alan K Walker	Director of Soybean Research	4-6-92

FORM CSSD-470 (5-89) Edition of FORM LS-470, 3-86, is obsolete

ASGROW SEED COMPANY
PVP APPLICATION A2242 SOYBEAN
APRIL, 1992

9200163

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF A2242

1985	Cross was made in Ames in 1985. Parentage: Sherman * XP1928 XP1928 = (Hardin*Williams)*[[(Tracy*Williams)*HW79149]*A3127]
1985-86 (Winter)	F1 and F2 generation grown at Isabela, Puerto Rico.
1986	F3 generation grown at Redwood Falls, Minnesota. Two hundred plants selected from a bulk population and threshed individually.
1987	Progeny Row J851432 A87-00921 was selected for its uniformity in plant height and standability. This row was harvested in bulk and seeds were checked and verified for uniform seed coat luster and hilum color.
Sept 1987	J851432 A87-00921 was determined to be a unique and stable line.
1988	J851432 A87-00921 was entered in a preliminary (R154-29) yield test, conducted at 5 locations in Minnesota, Northern Iowa and Wisconsin.
1989	J851432 A87-00921 was entered into the advanced S151 yield test conducted at 9 locations in 4 states.
Fall 1989	100 F6 plants were selected and threshed individually. 60 F6 plants were then sent to Puerto Rico for seed increase.
1990	J851432 A87-00921 was entered into the advanced V150 and V201 test as experimental stage 2 X2242, conducted at 15 and 20 locations respectively. A 40-entry subline yield test was conducted at 2 locations in 2 states. 4 sublines were bulked together to form the main seed source of X2242.
Fall 1990	90 lb of breeders seed was sent to Puerto Rico for seed increase.
1991	XP2242 was entered into the advanced V201 yield trial grown at 23 locations in 8 states. Foundation seed of XP2242 was produced near Perry, Iowa. XP2242 was nominated for release and assigned the designation A2242. A2242 is uniform and stable within commercially acceptable limits based on trial observations since September 1987. As with other soybean varieties, variants can occur for almost any characteristic during the course of repeated sexual reproduction.

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ASGROW SEED COMPANY
PVP APPLICATION A2242 SOYBEAN
April, 1992

EXHIBIT B

NOVELTY STATEMENT CONCERNING A2242 SOYBEAN

To our knowledge the soybean varieties that most closely resemble A2242 are A2234, Weber 84, ~~NK~~S 19-90. Characteristics which differentiate A2242 include:

1) Flower Color
A2242 = White
A2234 = Purple
Weber 84 = White
~~NK~~S19-90 = Purple

2) Pubescence Color
A2242 = Tawny
A2234 = Tawny
Weber 84 = Tawny
~~NK~~S19-90 = Tawny

3) Hilum Color
A2242 = Gray
A2234 = Black
Weber 84 = Black
~~NK~~S19-90 = Gray

4) Reaction to Races of Phythophthora megasperma f. sp. glycinea:

	Races																
	1	2	3	4	5	7	8	9	10	11	12	13	16	17	19	20	21	25
A2242	R	R	R	R	R	R	R	R	R	R	S	R	S	R	S	S	R	S
A2234	R	R	R	R	R	R	R	R	R	R	S	R	S	R	S	S	R	S
Weber 84	R	R	S	S	S	S	S	S	R	R	R	R	S	R	R	R	R	S
~~NK~~S19-90	R	R	R	S	S	R	R	R	S	S	S	R	S	S	S	S	R	S

20 July 1994

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FORM APPROVED: OMB NO. 0581-0055

EXHIBIT C
(Soybean)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
ASGROW SEED COMPANY	XP2242	A2242

ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*

9638-190-23
Gull Road, Building 190
Kalamazoo, MI 49001

FOR OFFICIAL USE ONLY

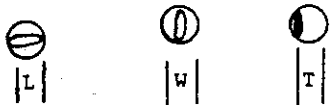
PVPO NUMBER

9200163

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[1]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ **2. SEED COAT COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[1] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ **4. SEED SIZE: (Mature Seed)**

[1][4] Grams per 100 seeds

★ **5. HILUM COLOR: (Mature Seed)**

[4] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

★ **6. COTYLEDON COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green

★ **7. SEED PROTEIN PEROXIDASE ACTIVITY:**

[2] 1 = Low 2 = High

★ **8. SEED PROTEIN ELECTROPHORETIC BAND:**

[1] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

★ **9. HYPOCOTYL COLOR:**

[2] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ **10. LEAFLET SHAPE:**

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

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11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17') 3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton') 3 = Dark Green ('Gnome'; 'Tracy')

★ **13. FLOWER COLOR:**

[1] 1 = White 2 = Purple 3 = White with purple throat

★ **14. POD COLOR:**

[1] 1 = Tan 2 = Brown 3 = Black

★ **15. PLANT PUBESCENCE COLOR:**

[2] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[2] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton') 3 = Bushy ('Gnome'; 'Govan')

★ **17. PLANT HABIT:**

[3] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will') 3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ **18. MATURITY GROUP:**

[0][5] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V 9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ **19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

BACTERIAL DISEASES:

★ [0] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

★ [0] Bacterial Blight *(Pseudomonas glycinea)*

★ [0] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

★ [0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

★ [0] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Other *(Specify)* _____

[0] Target Spot *(Corynespora cassiicola)*

[1] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[2] Powdery Mildew *(Microsphaera diffusa)*

★ [1] Brown Stem Rot *(Cephalosporium gregatum)*

[0] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

★ [0] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[0] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

★ [2] Race 1 [2] Race 2 [2] Race 3 [2] Race 4 [2] Race 5 [0] Race 6 [2] Race 7

[2] Race 8 [2] Race 9 [2] Other *(Specify)* Resistant to Race 10, 11, 13, 17, 21

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

★ [0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

★ [0] Race 1 [0] Race 2 [1] Race 3 [1] Race 4 [0] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

★ [0] Southern Root Knot Nematode *(Meloidogyne incognita)*

★ [0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[0] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[0] OTHER DISEASE NOT ON FORM *(Specify):* _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [1] Iron Chlorosis on Calcareous Soil

[ ] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[ ] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	A2234	Seed Coat Luster	A2234
Leaf Shape	Weber 84	Seed Size	Weber 84
Leaf Color	A2234	Seed Shape	A2234
Leaf Size	Weber 84	Seedling Pigmentation	Weber 84

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
A2242 Submitted	129	1.5	77	7.0	12.5	42.0	20.5	14	2.6
A2234 Name of Similar Variety	129	1.6	81	8.9	13.8	41.2	21.5	18	2.6

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

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ASGROW SEED COMPANY
PVP APPLICATION A2242 SOYBEAN
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EXHIBIT D

ADDITIONAL DESCRIPTION OF VARIETY

A2242 is an early group II cultivar that possesses an outstanding combination of characteristics needed by producers in its maturity zone. It combines high yield potential, excellent standability, resistance to powdery mildew and resistance to many races of Phytophthora megasperma f. sp. glycinea conferred by the Rps1K alleles.

ASGROW SEED COMPANY
PVP APPLICATION A2242 SOYBEAN
APRIL, 1992

EXHIBIT E

STATEMENT OF BASIS OF APPLICANT OWNERSHIP

A2242 was originated and developed by Roger L. Lussenden, an Asgrow plant breeder. By agreement between Asgrow Seed Company, all rights to any invention, discovery or development made by employees are assigned to the company. No rights of such invention, discovery or development are ~~returned~~ retained by the employee.

27 April 1992